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Certification of Person Responsible for
Technical Information

I hereby certify that I am the technically qualified person responsible for the preparation of the engineering information contained in these Comments, including Appendix B to the Comments, *Satellite Radio CD Music Bandwidth Requirements*; that I am familiar with Part 25 of the Commission's rules; that I have prepared or reviewed the attached filing; and that it is complete and accurate to the best of my knowledge.

My professional and educational qualifications are fully set out in the attached resume.

By: Robert D. Briskman
Robert D. Briskman
Professional Engineer
DC License # 749008279

Dated: Sept. 15, 1995

Sworn and subscribed to before me
this 15th day of SEPT., 1995

Roberta P. Barker
Notary Public

My Commission expires: 1-31-98



ROBERT D. BRISKMAN BIOGRAPHY

Mr. Briskman received his Bachelor of Science degree from Princeton University and a Master of Science in Electrical Engineering from the University of Maryland. He has been involved with the implementation of satellite communications systems since their inception. Mr. Briskman has been with CD Radio Inc. since 1991 and is a Director, Chief Technical Officer and President of CD Radio Systems which is developing a satellite radio system for mobile users in the United States.

Mr. Briskman was employed by the Geostar Corporation from 1986 to 1991 where he was Senior Vice President, Engineering and Operations. Mr. Briskman was with COMSAT from 1964 through 1985 where he last was responsible for providing technical services in the areas of satellites, earth stations and communications systems. He was Vice President, System Implementation of COMSAT General Corporation. Prior to joining COMSAT, Mr. Briskman was Chief of Program Support for the Office of Tracking and Data Acquisition at NASA and received the APOLLO Achievement Award from NASA. He worked for the Army Security Agency and IBM before NASA.

Mr. Briskman is a Fellow and past Director, Vice President for Technical Activities and Secretary-Treasurer of the IEEE and a Fellow of the AIAA. He has authored over forty technical papers, holds United States patents, served on the Industry Advisory Council to NASA, and is a licensed professional engineer.

APPENDIX C

Canadian Radio Frequency Coordination with U.S. DARS

Canadian Radio Frequency Coordination with U.S. DARS

The Commission mentions in several paragraphs of the NPRM the Study that CD Radio performed regarding coordination of DARS with Canadian radio receiving facilities operating in the 2310-2360 MHz band. The Commission proposes (para. 66 of the NPRM) "to consider only spectrum above 2320 MHz for initial U.S. satellite DARS systems unless we decide to auction this spectrum."⁶⁸ The Commission requests "specific comment on whether our conclusions are correct" and mentions in footnote 68 the CD Radio Study as support for not considering the spectrum 2310-2320 MHz.

CD Radio believes that its Study clearly supports including the 2310-2320 MHz portion of the 2310-2360 MHz band for initial DARS allocation. Basically, although the number of Canadian radio receiving facilities is currently largest below 2320 MHz, the interference potential is extremely small, and the technical ability is available to alleviate any such unlikely interference situations using the normal processes of coordination. Specifically, the Commission should note:

1. The Study specifies 140 Canadian receivers operating between 2310 and 2314 MHz and only 26 receivers between 2314 and 2320 MHz for a total of 166 receivers. It is not understood how the Commission calculated 186 receivers. Such total numbers of receivers are considered trivial when compared with normal US fixed service usage with which satellite systems routinely share frequency spectrum (e.g., C-band).

2. Most importantly, U.S. satellite DARS can operate efficiently without creating significant interference to adjacent country fixed services. All 166 of the above Canadian receivers meet the interference criteria established in the Study for the assumed DARS satellite beam edge power flux density with the worst case increasing the Canadian receiver noise floor only 1.5 dB (except for one single receiver at 2311 MHz which theoretically could increase the receiver noise floor by 2.5 dB). Most receivers have insignificant increases in noise floor (i.e., under 0.5 dB). The calculations in the Study supporting this conclusion can be summarized as follows:

Received Satellite Interference Power	-137.0 dBW
Receiver Antenna On-Axis Gain	+ 33.0 dBi
Receiver Antenna Off-Axis Attenuation	- 30.0 dB
Circular to Linear Polarization Loss	- 3.0 dB
Feeder Loss	- <u>7.0 dB</u>
(I) Satellite Interference Power at Receiver	-144.0 dBW
(N) Receiver Thermal Noise Power	-133.0 dBW
Resultant Receiver Noise (N+I)	-132.7 dBW
Receiver Impairment	0.3 dB

The calculation is for fixed service Canadian receivers near the United States border with antennas whose boresights are pointed 40° or more from all portions of the geosynchronous orbital arc between 70° and 120° W .Longitude. The result would be expected from the geometry wherein few Canadian receiver antennas will be pointing southward at a relatively high elevation angle (e.g., 15°). For receiver antenna pointing closer than 40° to this geosynchronous orbital arc segment, the receiver antenna off-axis attenuation progressively diminishes. At the established impairment

criteria of 1.5 dB, the receiver antenna boresight pointing angle is 15° or more. The receiver antenna off-axis attenuation at this geometry is -23.0 dB.

3. It is not logical to delay entering into coordination with Canada for the entire 2310-2360 MHz frequency band. The previous paragraph points out that the Study shows interservice sharing is technically achievable in the 2310-2320 MHz band, which is currently the most used portion of the 2310-2360 MHz band by Canadian fixed services. Such sharing can only be effected by coordination with the Canadians. Starting coordination as soon as possible both will accomplish this and will accommodate increased Canadian fixed service usage with time which may eventually fill the whole Canadian allocated band 2310-2350 MHz in a roughly equal manner. One aspect of the coordination would be avoidance of the 70°-120° W. Longitude geosynchronous orbital arc by future Canadian fixed service receiving antennas sharing the 2310-2360 MHz band with U.S. DARS.

4. There are a number of variables mentioned in the Study which should make coordination with Canada easier. Two of these are:

a. Use of different geosynchronous orbital positions by U.S. DARS satellites (i.e., other than the worst case orbital arc end points of 70° and 120° W. Longitude used in the Study). For instance, the one Canadian receiver at 2311 MHz mentioned in Paragraph 2 which somewhat exceeds the noise floor criterion for its assumed orbital location at 70° W. Longitude actually well meets the criterion for a

DARS satellite at 80° W. Longitude, which is the eastmost orbital position so far requested by any U.S. Applicant. The improvement is 4 dB which makes the total Canadian receiver noise floor impairment only 1 dB.

b Use of actual Canadian receiving system characteristics. Two characteristics where improvement can often be found are the receiver antenna pattern and allowable receiver noise floor. The antenna pattern data used in the Study are worst case reflecting the minimum antenna off-axis attenuation characteristics allowed by the Canadian government. Many antennas in whole or part exceed the minimum. The allowable noise floor is a function of the number of series repeaters (i.e., radio relay hops) and desired multipath margin. For the usage in this band, many Canadian fixed service systems have small numbers of hops which often could allow a higher interference impairment level than used in the Study. Other characteristics can likewise be beneficial.

5. There could in the future be a particular Canadian receiver which might be subject to interference higher than desired. In this remote possibility, there are still methods which can be employed to solve such a situation. One method is to change the receiver and its associated transmitter to another frequency in the 2310-2350 MHz band, a second method is to change the receiving antenna to a more directive one and a third method is to increase the power of the transmitter which is sending to the receiver so that the required multipath fade margin is restored. It is also feasible to combine such methods. For small numbers of such cases, the cost of employing these

methods are modest. The employment of such interference mitigating methods have been and are normal for the coordination process.

It is concluded that there is no technical reason why the 2310-2320 MHz frequency band cannot be coordinated between U.S. DARS satellites and Canadian fixed service receivers operating in this band.

9/13/95

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APPENDIX D

Articles from the trade press and market analysts
confirming the competitive strength of the traditional radio industry

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"DARS Grabs Attention of NAB Radio Show," *Communications Daily*, September 11, 1995 at 4.

"'Steady' Growth Seen In Ad Spending Over Five Years," *Marketing News*, September 11, 1995 at 3.

Mass Media (section), *Communications Daily*, September 6, 1995 at 7.

"Hundt: Radio Is Strong," *Radio World*, August 23, 1995 at 1, 14, 16.

"Radio's Revenue Rocket Takes A Breather; June Jumps 6%," *Radio Business Report*, July 31, 1995 at 2.

"Radio Stocks Flourish in First Half," *Broadcasting & Cable*, July 10, 1995 at 35.

"Radio Fast Approaching the \$12 Billion Year," *Radio Business Report*, July 3, 1995 at 7.

"Radio Revenue Observations From The Industry Leaders," *Radio Business Report*, July 3, 1995 at 8-9.

"Radio Stocks Riding High After Senate Dereg Vote," *Radio & Records*, June 23, 1995 at 1, 13.

"Banks Slowly Open Vault for Smaller-Market Deals," *Broadcasting & Cable*, June 12, 1995 at 34.

"Ad Revenue Up 10%," *Broadcasting & Cable*, June 12, 1995 at 35.

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"Newspapers' Loss May Be Radio's Gain," *Broadcasting & Cable*, May 15, 1995 at 38.

"Brisk Gains In First Quarter for Radio Group Owners," *Broadcasting & Cable*, May 8, 1995 at 66-67.

"Radio Advertising Up 13% in First Quarter," *Broadcasting & Cable*, May 8, 1995 at 67.

"National Semiconductor to Build Decoder Chips for DAB Radios," *Satellite Week*, April 17, 1995 at 6.

"Local Revenue for February: +13.7%," *Radio Business Report*, April 10, 1995 at 15.

"Advertisers Expected to Favor Radio in '95," *Broadcasting & Cable*, March 20, 1995 at 45.

"National Spot Revenue Up 38%," *Broadcasting & Cable*, March 13, 1995 at 56.

"Station Sales Encore in '94," *Broadcasting & Cable*, February 27, 1995 at 32-33.

"RAB Meeting Marks Prosperous Year," *Broadcasting & Cable*, February 27, 1995 at 55.

"Radio Groups Finish '94 With Solid Gains," *Broadcasting & Cable*, February 20, 1995 at 55.

"1994 Radio Advertising Revenues Break \$10 Bil Ceiling, Growing 11.3% from '93," *Billboard*, February 18, 1995 at 111.

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"Radio Sees Big Revenue Gains in 1994," *Broadcasting & Cable*, February 13, 1995 at 40.

"Banner Year: Radio Breaks \$10 Million in Revenue, 11.3% Jump Biggest Since '85," *Radio Business Report*, February 13, 1995 at 2, 4, 12.

"1994 Spot Up 15% in Top 100 Markets," *Radio Business Report*, January 30, 1995 at 4.

"Ads On Radio Posted Strong Gains in 1994," *The New York Times*, January 2, 1995 at 40.

"On a Roll Like Never Before, RAB Looks to Maintain Radio's Growth Momentum," *Radio Business Report*, November 21, 1994 at 4.

"September: Radio's 25th Consecutive Month of Growth; Combined Local, National +10%," *Radio Business Report*, November 7, 1994 at 2.

"Kagan Panelists on Radio: Pump Up The Beat," *Radio Business Report*, October 31, 1994 at 14.

"Broadcasters See Revenue Growth in Radio's Future," *Broadcasting & Cable*, October 24, 1994 at 37-38.

"Fries 'States of Sales' Address: 'Farm, Don't Hunt,'" *Radio Business Report*, October 17, 1994 at 2, 4.

"Radio Group Owners See Bright Future for Radio," *Radio Business Report*, October 17, 1994 at 4.

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"In Annual 'State of the Industry,'" *Communications Daily*, March 22, 1994 at 2.

DARS GRABS ATTENTION OF NAB RADIO SHOW

Speaking day before Hundt, NAB Pres. Edward Fritts said many are predicting "plethora of new technologies will be the death knell of local stations. My friends, the death knell for radio has sounded before [and] radio has refused to answer that call... As we provide the public with relevant programming, I predict America's love affair with radio will only be enhanced."

'Steady' growth seen in ad spending over five years

Communications industry spending by advertisers and consumers will reach \$323.7 billion by 1999, according to the ninth annual "Communications Industry Forecast" by Veronis, Suhler & Associates, New York.

Spending is expected to rise 6.8% over the 1994 to 1999 period, said the investment banking firm specializing in communications. Ad spending will grow by a predicted 5.7% in each of the years. Advertising will reach \$126.3 billion, and end-user spending will total \$197.4 billion by 1999.

"While the expected economic slowdown over the next two years will moderate growth, advertising will grow at steady, mid-single-digit rates over the forecast period and will outpace GDP growth," said John S. Suhler, company president.

Interactive digital media, which includes consumer on-line/Internet-access services, packaged PC/multimedia software, and video game software, will be the fastest growing sector during the five years, with a 19.9% compound annual rate reaching \$14.2 billion by 1999, the report said. It will be difficult for computer manufacturers to generate household penetration in excess of 50% due to high price points, the report added, and consumers will begin to bypass packaged on-line services and use a more user-friendly Internet. CD-ROM sales will drop due to low-quality offerings, but sales channels will increase. Game play will improve as computers are upgraded, and those changes will increase game sales.

The study made the following predictions for the 1994 to 1999 period:

□ **Radio broadcasting:** Through 1999, total radio ad spending will increase by 7.1% to reach \$14.5 billion. The conclusion of corporate restructuring and a healthy economy will see station advertising spending hit \$13.9 billion. Network advertising will reach \$600 million by 1999.

Total radio revenues were up 6% in July, industry's 35th consecutive month of growth, according to Radio Ad Bureau (RAB). Local revenues were up 7% over July 1994, 10% for Jan.-July 1995, while July national revenues were flat, but also showed 10% gain for 7 months, RAB said. Figures are based on reports from more than 100 markets.

Hundt: Radio Is Strong

EDITOR'S NOTE: Reed E. Hundt was named chairman of the Federal Communications Commission by President Clinton on Nov. 19, 1993. His term will expire June 30, 1998.

*Hundt agreed to talk with **Radio World** Editor in Chief Lucia Cobo and Staff Writer Lynn Meadows about issues facing radio and the future of the medium.*

Before assuming his current post, Hundt was a partner in the Washington law offices of Latham & Watkins, where his work included legal and regulatory issues in emerging technologies such as cellular telephones, wireless cable, direct broadcast satellite and interactive television.

Hundt graduated Magna Cum Laude from Yale College and graduated from Yale Law School.

entertainment, a certain amount of news, but markets are not perfect — they leave things out.

Public interest is whatever the markets do not give us but which as a society we deserve.

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RW: *The radio industry would like to know a bit better, who you are and what your ideas are regarding certain areas of concern — digital audio radio satellite, digital audio broadcast terrestrial and from a regulatory standpoint also.*

H: I think we have essentially two jobs here at the FCC. First, it ought to be our job to write fair rules on competition in all markets, and second, it ought to be our job to advocate the public interest.

Public interest is whatever the country needs for communications that markets are going to give it. The normal workings of the market are going to give you many benefits, economic growth, job growth, diversity of programming, lots of different

Technology Marketplace Must Thrive

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When it comes to radio, we need to figure out what are the fair rules of competition in the changing world and also what is the public interest stake in radio land.

RW: *The biggest fear in radio right now is that the advent of so much new technology could mean radio gets left behind. You are in the middle of a comment period right now for digital audio radio satellite. Is there anything you would encourage radio broadcasters to do in preparation for DARS?*

H: Yes. I think right now radio is a very strong industry, doing very well economically. Radio operators are holding a lot of high cards in the high stakes game of the communications revolution, but there is a lot to worry about.

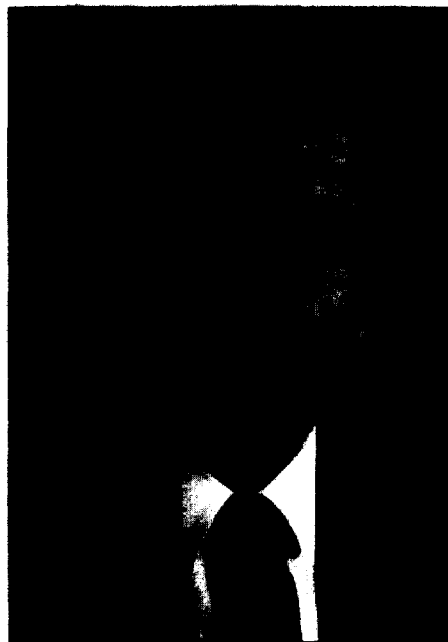
But, we also can try to be sensitive to the competitive impact of this new technology. I personally think there is a very good chance that a national satellite radio service will intensify the inherent advantages of local markets that radio stations have. I hope that is true. We need to talk about that candidly with radio operators and that is one of the things I want to do at the World Media Expo.

RW: *And what about the progress of digital audio broadcasting? If, when all is said and done, all the data gathered and collected, you find that none of the in-band systems are that good, quite frankly, are you prepared to start again, look elsewhere, push for out-of-band?*

H: Well, we certainly could do that, but I have heard only positive things about the technological progress. People are giving me constantly optimistic reports and the commission has, quite intentionally, tried to structure the introduction of DARS with progress of

in-band digital because it makes sense for those two events to be unfolding at more or less the same time.

RW: *Recently, news reports suggest that some of our*



FCC Chairman Reed Hundt

Congressmen have been talking about doing away with the FCC or restructuring it. What you think the FCC's role is in our world today and in the future?

H: If the FCC did not exist, the public would want to invent it right away because someone has to advocate the public interest in the communications revolution. Someone needs to figure out how to get every classroom in the country connected to communications net-

works. Someone has to figure out how to get children's educational TV delivered free over the air so that even the one-quarter of our children who live in poverty could have access to it.

And someone has to figure out how to preserve competition in the local radio markets. I think it is silly to say 'Let the Department of Justice handle it' because that means, first let the competition be killed, and then let somebody who is the president of a dead business hire a lawyer to file a lawsuit in order to collect damages. How about if we just have a blueprint for competition so that it never gets extinguished?

That is the kind of job that the FCC should be doing — making sure that there is a blueprint that keeps competition alive even as technologies are constantly evolving and the businesses are constantly changing.

That is why our main concern right now with respect to radio competition is not only the satellite, but — very immediately — is Congressmen who go too far in precluding sensible rules with respect to radio ownership. I hope not, because everybody in the radio business would suffer if the vigorous competition of today is replaced by over-concentration and domination by a few.

There are not many people who will deny that radio is a robustly competitive business right now. This is in part because of our rules. Our rules, like rules of a football game, let the players play, and they know what the rules are, they follow them and it is a fair fight.

It is not a fair fight if you drop all regulation, and you let the person who happens to have the most money on that day buy out all the systems and go too far and stop the competition, and replace it with a monopoly.

RW: *And what is the FCC able to do?*

H: We are still the watchdog with respect to national ownership caps and with respect to local competition. We will have to wait and see what Congress comes up with on both of these subjects.

But on a whole different topic, one that I think radio ought to be talking about among itself and expressing its own views about is this: How can radio deal with the degrading of our political discourse system?

There is an incredible volume of misinformation that is spread across this country. People in this country who are decent intelligent people are possessed of all kinds of utterly false fantastical concepts, and they are hearing this stuff in large part from the mass media. Now what can radio, which is a tremendous distributor of news, do about this?

And, how can radio reconcile this kind of responsibility to a certain public interest with such scenes as giving an

award to Gordon Liddy? How can you, if you are in the radio industry, deal with your own obvious desire to serve the public interest and your industry's truly bizarre commendation of this particular individual for statements that if your teenager were to make you would reprimand?

RW: *Are you talking about reinstating the Fairness Doctrine?*

H: No. I am saying, when is somebody from radio going to talk publicly about this? When is somebody from radio going to come in and tell me that they are a little sorry that this state of affairs is occurring and they have some ideas for dealing with it? And am I going to hear at this convention that there are people in the radio business who have some awareness of the disconnect between their capability to inform the country accurately and fairly, and the country's wild, fictitious, fantastical, conspiratorial suspicions that are promoted in significant part by radio?

I am not in the mode of saying it is my job to be the national nanny. I am in the mode of coming in as a supplicant saying: Do you all have any ideas?

RW: *OK. It is a very interesting parallel to the V-Chip and what they are doing on TV ...*

H: It is a very accurate parallel, but I do not think that radio should let this dialogue go on to the point that people have to start talking about a H-chip that cuts off hearing of radio.

What we need is to hear from radio some evidence of self-awareness about this particular problem. Now, to give you an example, (Commissioner) Jim Quello has talked about editorial boards and ombudsmen and self-correction techniques.

Does the radio industry have a basis for saying that it does those kinds of things? Does the radio industry have any thought about creating self-generated codes of ethics or accuracy in the media? I do not know the answers to these questions but I am saying to you that I am interested in hearing whether there are answers, or whether there are people seriously raising the questions.

RW: *It is an interesting question. Back in the earlier days of radio it seemed that there was more self-policing, like when a Westinghouse would deliberately walk away from cigarette advertising long before you could not advertise cigarettes on the air. Maybe you will get some e-mail on it.*

H: That would be great! You know, I am a confirmed fan of radio. I remember putting it under the blankets and listening to it late at night so my parents did not realize that I was still awake; having it on in the car for the last 30 years and listening to pretty much every kind of station there is.

What is also true is that radio is a tremendous source of energy and it is a hugely important source of information, more now than ever before, except that a lot of this information is disinformation. I do not ever want to see us in this country be in a position where radio's audience finds radio content to be repugnant; where radio's audience feels that radio has become a fringe media because it is not expressing mainstream

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Control Your Own Future

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views, mainstream values, or reliable information.

We have plenty of channels — there is chance for every kind of mode of expression. There are plenty of chances for people to exercise free speech — that is not the issue.

The issue is: Is there going to be enough responsibility to exercise the right of free speech alone, but also to fulfill the duty of accurate free speech? What is radio doing about that? I have got to tell you, when radio is giving awards to G. Gordon Liddy for expressing advice about how to kill law enforcement officers this is not what I consider to be

responsive to this issue.

RW: *You have mentioned a couple times the information infrastructure. Let's talk about what is the role of broadcasters or what part will they play in that information infrastructure?*

H: When it comes to helping us teach our kids and raise our kids, broadcasters can have all the rule they want. We all have a problem in raising kids in this incredibly complex and challenging society.

It is a lot more difficult for kids now than when I was growing up in every conceivable respect. The world is more violent, the schools are in worse shape,

society's more complex, they have to learn more, this complete economy is more competitive, everything is frankly a lot more challenging, and we need every tool we can as a country to help our kids cope with this, and the tools of the electronic media are supple, flexible and wonderful to use if they are used right.

This is a great opportunity for TV and radio to help us all raise our children. Educational radio shows are particularly acceptable. Talk shows specifically designed for kids where they have a chance to express themselves are perfectly acceptable. PSAs on radio and on TV that help give kids some ideas of how to cope with this society are perfectly acceptable.

These are just some of the tools that broadcast TV and radio can give all of us

as parents and adults, and none of that needs to be dependent on the FCC becoming the Federal Criticism Commission. It is the type of activity that, if nothing else, ensures that those media continue to have their hold on the imaginations of the country.

We are in a situation right now in this country in which the activity of playing video games is now consuming as much or more of kids' time than their listening to radio or watching TV, with the exception of just one of the TV networks, that broadcasts a lot directed at children, and that's Fox. Video games are in effect like a network in terms of captivating kids' intelligence and interest.

That is really not something to be indifferent about if you are in the radio or TV business because it means you are losing the audience of tomorrow.

It also means that you are not necessarily losing it to a media that parents particularly love. This particular media of kids' video games is one in which sales for Mortal Kombat in this country annually are greater than all the sales of education software alone. I do not regard this as a positive fact for radio and TV as a business or a positive fact for the country as a parent.

It should be regarded as a challenge for radio and TV, let's get those kids back. Let's figure out how to deliver a product that interests them and at the same time provides benefits to their families.

RW: *I know that you are very proud of the fact that you sort of brought the FCC into the modern era. What can you tell us about that?*

H: The computerization and the networking of the commission is at least one of our tangible signs of progress. We are up to 14,000 Internet hits per day.

RW: *Are you getting the response that you hoped to?*

H: It is actually beyond what anyone had predicted. We did not realize just how wonderful it would be for all of us to be open to communication through these new tools, and we get all kinds of information that helps us shape our opinions.

It is just great to feel that we are more open to the public. Last night and tonight I was on-line for open conversations with anybody in the country.

RW: *You have a few more of those coming up, don't you?*

H: After tonight, the next thing we are going to do is have non-real-time conversations where we post a question on a bulletin board one day and then collect conversation.

That way I can come in on a regular Tuesday morning or Thursday night and participate in a discussion. I think that is another good technique (forum).

There is one downside that I should confess. This has completely eliminated all of my arguments at home against getting an ISDN Internet connection and new computers for the kids. So now I have to scrape up the money.

RW: *What is your favorite Washington radio station?*

H: I never like to pick favorites because it seems unfair and also because they change every week. I will just have to settle for telling you that I am an eclectic listener.

RADIO NEWS

Radio's revenue rocket takes a breather; June jumps 6%

June was radio's 34th consecutive month of revenue growth, albeit at a slightly-slower pace than the sensational gains posted in the first half of the year. Combined local and national spot revenues rose 6% in June, according to the RAB's just released June revenue report. Local was up 7%, while national spot registered a very modest 1% increase over June of 1994.

The industry's year-to-date results are still in double-digits, with an 11% gain overall.

The June increase is only the fourth month out of the last 20 to post less than double-digit growth. In one incredible growth burst (October '94 through February '95), the industry racked up a blazing 14.6% overall growth rate. The mostly-double-digit growth period stretches back to November, 1993.

Most industry observers see the June results as a temporary slowdown rather than a long-term trend (see last week's lead story, (RBR 7/24, p. 2). Most group heads report

robust mid-to-late summer spot demand, as do the heads of the major rep firms. The RBR/Miller, Kaplan spot pacing report shows inventory demand several points ahead of last year in both August and September. "In reviewing the business, it still appears that we will have a strong third and fourth quarter developing," notes RAB President/CEO **Gary Fries**.

Radio stocks flourish in first half

Boosted by economy and anticipation of deregulation, average price up 46%

By Donna Petrozzello

Radio stock prices in the first six months of 1995 have paced well above the market average, spurred by declining interest rates, healthy advertising revenue and the prospect of deregulation of the industry.

The average radio group stock price appreciation since Dec. 31 is 46%, compared with the Nasdaq composite index stock price appreciation year-to-date of 25.5%, according to broadcast analysts with Alex. Brown & Sons. Industry analysts expect the uptick to continue for the rest of the year.

"Clearly, the radio group is reacting favorably to the anticipation of deregulatory events as part of the telcom bill," says broadcast analyst Drew Marcus of Alex. Brown & Sons.

"Radio stocks are up an average 50%," says stock analyst Harry DeMott of First Boston. He cites strong advertising revenue, lower interest rates and, particularly, the anticipation of deregulation as key factors "pushing these stocks up into the stratosphere."

DeMott predicts that radio stock prices will rise slightly for the rest of 1995: "These stocks should do no worse than the market overall and will probably come out ahead of the market."

The potential for industrywide ownership deregulation is one of the major factors propelling radio stock prices. After the Senate vote to adopt the telcom bill, which eliminates national and

RADIO STOCKS AT A GLANCE		
<i>Company (symbol)</i>	<i>Price per share 12/31/94</i>	<i>Price per share 7/5/95</i>
American Radio Systems (AMRD)	N/A*	\$24.25
Clear Channel (CCU)	\$50.75	\$63.50
Citicasters (CITI)	\$16.50	\$28.00
Emmis Broadcasting (EMMS)	\$13.50	\$27.38
Evergreen Media (EVGM)	\$17.50	\$26.00
EZ Communications (EZCIA)	\$12.50	\$18.85
Heftel Broadcasting (HBCCA)	\$10.00	\$15.50
Infinity Broadcasting (INFTA)	\$21.00	\$33.50
Jacor Communications (JCOR)	\$13.25	\$16.00
SFX Broadcasting (SFXBA)	\$18.50	\$26.63
Saga Communications (SGA)	\$14.38	\$21.50
Westwood One Inc. (WWONE)	\$9.75	\$15.12

Notes: Closing-day market statistics provided by CS First Boston brokers.

*American Radio Systems debuted on Nasdaq at \$16.50 per share on June 9.

local station ownership limits, stock prices for several radio groups jumped in mid-June.

Clear Channel Communications stock, for example, traded at \$61 per share on June 9 and at \$64 per share one week after the vote. Likewise, shares of Infinity Broadcasting Corp. traded at \$30.25 on June 9 and at \$34.50 on June 16.

The telcom bill also is expected to gain strong support from the House of Representatives, which will debate the bill later this month. Analysts agree that the prospect of deregulation and declining interest rates will keep radio stocks attractive.

"It is very rare that stocks will move in the opposite direction in the face of a deregulation," Marcus says. "Under a deregulatory environment, you'll see massive consolidation in the industry [that] will be good for stock prices." He added that after the Congress approved duopoly in radio ownership in September 1992, the consolidation that followed spawned stock price increases among the radio groups that traded publicly.

Analysts also have speculated that radio advertising may be bolstered during the last half of 1995 with ads for the 1996 summer Olympics and political ads for the 1996 presidential election, which may keep revenue growth strong. ■

MID-YEAR REVIEW & FORECAST

Radio fast approaching the \$12 Billion year

Standard & Poor's Media Analyst **William Donald** expects total radio revenues to reach \$11.79 Billion in 1995, a 10.6% gain over 1994 (and a slim \$210 Million away from \$12 Billion). He expects national spot to rise 15% this year and for local to rise 9.9%. **McCann-Erickson** Senior VP/

Director Forecasting **Bob Coen** expects total radio revenues to hit \$11.5 Billion. He expects spot and network radio to grow 10% this year, to \$2.6 Billion and for local radio to grow 9%, to \$8.9 Billion. Here's what the forecasting gurus see coming our way:

Bob Coen, Senior VP/Dir. of Forecasting, **McCann-Erickson**—Despite signs of developing economic sluggishness, the financial conditions of most national marketers are far better than they have been for years. The business climate is now focused on aggressive expansion rather than extreme cost constraints on marketing budgets. The market for media time and space is enjoying record activity and the media spending momentum is still rising.

The first quarter loss in the revenues of the four TV networks should be offset by increases during the rest of the year and a gain of 5% is presently projected for 1995.

Most of the other media are expected to register even better gains....

The recovery in local advertising finally arrived in 1994 as consumer spending improved sharply at the retail level. After years of financial disappointment, local retailers gradually became more confident and slowly began to expand their advertising budgets.

The extremely tight advertising budgeting practices that persisted during and immediately following the recession changed significantly in 1994, but there is no doubt that local marketers are still highly conscious of the need for tight cost controls. The local advertising trends are improving but advances are mixed and much stronger in some media and local industries than in others.

A modest pickup in consumer spending in the second half of this year combined with some momentum in local competitive advertis-

ing usage should keep the local advertising recovery going.

The combination of respectable growth in local advertising and large increases in many national marketers' budgets should make 1995 another outstanding year for total U.S. advertising.

An economic slowdown in the U.S. could hurt advertising, but 1996 will be an important election year and the Administration will strive to hold off a serious slowdown. Most experts concede that a true recession is highly unlikely.

William Donald, Media Analyst, **Standard & Poor's**—After many years of having been relegated to the status of broadcasting stepchild, a marketing afterthought to many advertisers and ad agency personnel, radio has apparently come into its own and is again enjoying a golden age in terms of its appeal as an advertising medium.

March 1995 marked the 31st consecutive month of year-to-year radio revenue gains—healthy ones....

The outlook for the remainder of 1995 and 1996 is also positive. We project that total advertising will rise 10.6% in 1995, to nearly \$11.79 billion, including a 15% advance in national spot and a 9.9% rise in local. For 1996, total advertising should rise 9.7%, comprised of another 15% gain in spot and an 8.7% improvement in local advertising.

Radio ads are perceived as relatively cost-effective by advertisers even though prices have risen in step with the pickup in demand since the last advertising recession in 1991-92. During that recession, faced with a life-or-death situation, radio's sales teams got better and smarter. Although stations were forced to mark down their rates in order to survive, they began to cooperate in local market and industrywide efforts to do a better job of marketing radio as an ad medium.

Gary Fries, Chairman, **Radio Advertising Bureau**—It's been a good first-half for radio and there's nothing on the horizon to

suggest anything but continued good growth for radio through the fourth quarter and into 1996. Radio's biggest challenge is to face the challenge of having higher inventory-sell-out percentages. That means using better pricing strategies and techniques. It also means extending our revenue streams into other areas to better serve our customers. As we work aggressively along these lines, we'll create a better value of service for our customers and that will justify creating increased revenue streams. If we can do that, the radio industry will continue to have incredible growth.

How radio's first quarter measures up to other media (in \$ Millions)

	1Q '94	1Q '95	% change
Radio total	\$1,479.6	\$1,683.9	13.8%
Local radio	1,109.7	1,231.8	11.0%
Nat'l spot (radio)	219.6	270.6	23.2%
Network radio	150.3	181.5	20.8%
Newspaper	7400	7800	5.4%
Cable	263.8	300.8	14.0%
TV	6,401.0	6,513.5	1.8%

Sources: Newspaper Association of America; Paul Kagan Associates, Inc.; Television Bureau of Advertising; Competitive Media Reporting; Radio Advertising Bureau